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O. J. Whittemore, U.S.
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R. K. Wood, U.S.

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Historical Data on The American Ceramic Society

Year	Meeting Place	President Installed	Vice President
1899	Columbus, Ohio	H. A. Wheeler (gen)	Ernest Mayer
1900	Detroit, Mich.	Karl Langenbeck (gen)	C. F. Binns
1901	Old Point Comfort	C. F. Binns (art)	Ernest Mayer
1902	Cleveland, Ohio	Ernest Mayer (W)	F. W. Walker, Sr.
1903	Boston, Mass.	E. C. Stover (W)	Heinrich Ries
1904	Cincinnati, Ohio	F. W. Walker, Sr. (W)	A. V. Bleininger
1905	Birmingham, Ala.	W. D. Gates (terra cotta)	Ellis Lovejoy
1906	Philadelphia, Pa.	W. D. Richardson (S)	Samuel Geijsbeek
1907	St. Louis, Mo.	S. G. Burt (art)	R. C. Purdy
1908	Columbus, Ohio	A. V. Bleininger (W)	Charles Weelans
1909	Rochester, N. Y.	R. C. Purdy (gen)	A. S. Watts
1910	Pittsburgh, Pa.	Heinrich Ries (gen)	R. R. Hice
1911	Trenton, N. J.	Charles Weelans (W)	L. E. Barringer
1912	Chicago, Ill.	A. S. Watts (gen)	C. W. Parmelee
1913	Washington, D. C.	Ellis Lovejoy (S)	A. F. Hottinger
1914	Wheeling, W. Va.	C. W. Parmelee (gen)	D. T. Farnham
1915	Detroit, Mich.	R. R. Hice (S)	R. T. Stull
1916	Cleveland, Ohio	L. E. Barringer (W)	F. K. Pence
1917	New York, N. Y.	G. H. Brown (gen)	C. E. Jackson
1918	Indianapolis, Ind.	H. F. Staley (C)	A. F. Greaves-Walker
1919	Pittsburgh, Pa.	R. T. Stull (S)	R. H. Minton
1920	Philadelphia, Pa.	R. H. Minton (W)	E. T. Montgomery
1921	Columbus, Ohio	F. K. Pence (W)	F. B. Ortman
1922	St. Louis, Mo.	F. H. Riddle (W)	E. Ward Tillotson
1923	Pittsburgh, Pa.	A. F. Greaves-Walker (R)	R. D. Landrum
1924	Atlantic City, N. J.	R. D. Landrum (C)	R. M. Howe and August Staudt
1925	Columbus, Ohio	E. Ward Tillotson (G)	F. H. Rhead
1926	Atlanta, Ga.	R. L. Clare (terra cotta)	B. Mifflin Hood
1927	Detroit, Mich.	B. Mifflin Hood (S)	M. C. Booze
1928	Atlantic City, N. J.	M. C. Booze (R)	R. R. Danielson
1929	Chicago, Ill.	G. A. Bole (gen)	F. A. Harvey
1930	Toronto, Canada	Edward Orton, Jr. (gen)	P. E. Cox
1931	Cleveland, Ohio	E. V. Eskesen (terra cotta)	Alexander Silverman
1932	Washington, D. C.	E. P. Poste (C)	W. Keith McAfee
1933	Pittsburgh, Pa.	J. C. Hostetter (G)	L. J. Trostel, Sr.
1934	Cincinnati, Ohio	W. Keith McAfee (W)	J. M. McKinley
1935	Buffalo, N. Y.	J. M. McKinley (R)	F. C. Flint
1936	Columbus, Ohio	F. C. Flint (G)	R. B. Sosman
1937	New York, N. Y.	R. B. Sosman (R)	V. V. Kelsey
1938	New Orleans, La.	V. V. Kelsey (M)	A. I. Andrews
1939	Chicago, Ill.	A. I. Andrews (C)	J. L. Carruthers
1940	Toronto, Canada	J. L. Carruthers (terra cotta)	J. T. Littleton
1941	Baltimore, Md.	J. T. Littleton (G)	P. D. Helser
1942	Cincinnati, Ohio	L. J. Trostel, Sr. (R)	M. E. Holmes
1943	Pittsburgh, Pa.	C. E. Bales (R)	E. H. Fritz
1944	Pittsburgh, Pa.	E. H. Fritz (W)	C. Forrest Tefft
1945	Buffalo, N. Y.	C. Forrest Tefft (S)	J. E. Hansen
1946	Buffalo, N. Y.	J. E. Hansen (C)	J. D. Sullivan
1947	Atlantic City, N. J.	J. D. Sullivan (R)	J. W. Whittemore
1948	Chicago, Ill.	J. W. Whittemore (gen)	H. M. Kraner
1949	Cincinnati, Ohio	H. M. Kraner (R)	Howells Frechette, A. L. Bennett, Robert Twells
1950	New York, N. Y.	J. W. Hepplewhite (W)	Aaron K. Lyle, Hewitt Wilson, T. A. Klinefelter
1951	Chicago, Ill.	Howard R. Lillie (G)	Probert W. Dager, Ray W. Pafford, Arthur A. Wells
1952	Pittsburgh, Pa.	W. Edward Cramer (W)	Victor C. Swicker, Harry H. Holscher, H. B. DuBois
1953	New York, N. Y.	R. R. Danielson (C)	J. E. Eagle, Joseph A. Pask, S. M. Swain
1954	Chicago, Ill.	Ray W. Pafford (S)	William O. Brandt, John F. McMahon, Rolland R. Roup
1955	Cincinnati, Ohio	Robert Twells (W)	R. S. Bradley, John H. Isenhour, Kenneth C. Lyon
1956	New York, N. Y.	Karl Schwartzwalder (W)	Oscar G. Burch, Louis Navias, C. W. Planje
1957	Dallas, Texas	John F. McMahon (gen)	Wayne A. Deringer, Clarence H. Hahner, J. S. Nordyke
1958	Pittsburgh, Pa.	R. S. Bradley (R)	W. W. Coates, Harry E. Davis, Herbert Insley
1959	Chicago, Ill.	Oscar G. Burch (G)	J. J. Canfield, John H. Koenig, James I. Mueller
1960	Philadelphia, Pa.	George H. Spencer-Strong (C)	Eugene C. Clemens, Frederick H. Norton, Andrew Pereny
1961	Toronto, Canada	John S. Nordyke (M)	V. J. Duplin, Leonard G. Ghering, Elroy E. Howe
1962	New York, N. Y.	John H. Koenig (E)	W. W. Gaskins, Frank Jansma, E. F. Osborn
1963	Pittsburgh, Pa.	Paul V. Johnson (S)	H. P. Bonebrake, Clair R. Oberst, James S. Owens
1964	Chicago, Ill.	Elburt F. Osborn (B)	R. R. Rhodes, G. J. Middleton, W. J. Smothers
1965	Philadelphia, Pa.	Howard P. Bonebrake (M)	R. E. Birch, L. S. O'Bannon, A. E. R. Westman
1966	Washington, D. C.	George J. Bair (G)	Arthur J. Blume, Edward C. Henry, Harry W. Thiemecke
1967	New York, N. Y.	James S. Owens (W)	Howard F. McMurdie, Alfred W. Allen, J. Earl Frazier
1968	Chicago, Ill.	Loran S. O'Bannon (C)	Clarence L. Babcock, Lane Mitchell, Theodore J. M. Planje
1969	Washington, D. C.	Arthur J. Blume (S)	William W. Coffeen, Scroop W. Enloe, Jr., J. O. Everhart
1970	Philadelphia, Pa.	J. Earl Frazier (G)	Eugene E. Bryant, Richard M. Fulrath, Ralph L. Gibson
1971	Chicago, Ill.	William J. Smothers (R)	James R. Johnson, Robert S. Sinclair, Stephen D. Stoddard
1972	Washington, D. C.	T. J. Planje (R)	Joseph E. Burke, Robert S. Du Fresne, William R. Prindle
1973	Cincinnati, Ohio	James R. Johnson (B)	Lyle A. Holmes, Walter W. Perkins, Merton L. Van Dreser
1974	Chicago, Ill.	Joseph E. Burke (B)	William J. Knapp, Malcolm G. McLaren, Haydn H. Murray, Basil G. Staples, Franklin M. Townsend
1975	Washington, D.C.	Ralston Russell, Jr. (W)	Sherwood E. Patek, John A. Stewart, O. J. Whittemore, Jr.
1976	Cincinnati, Ohio	Stephen D. Stoddard (N)	Gordon L. Barna, Seymour L. Blum, Winston Duckworth
1977	Chicago, Ill.	Lyle A. Holmes (M)	William C. Mohr, Guy E. Rindone, Ronald R. Roup
1978	Detroit, Mich.	John B. Wachtman, Jr. (B)	A. Josephine Gitter, Milan Vukovich, James C. Waldal

American Ceramic Society
Publications on Ceramic Science

1975 Supplement, Phase Diagrams for Ceramists (with commentaries)

This volume was compiled by Ernest M. Levin and Howard F. McMurdie, of the National Bureau of Standards, and edited and published by the American Ceramic Society.

The 1975 Supplement adds 850 new phase equilibrium diagrams, mainly from literature published since 1967, to those published in the basic 1964 volume* and the 1969 Supplement.† Together the three books provide 4999 phase equilibrium diagrams, organized and indexed for convenient reference. The 1975 Supplement contains cumulative indexes for all three volumes.

Unlike the first two volumes, the 1975 Supplement contains commentaries by the compilers pertinent to the accuracy of the diagrams, methods and chemicals used, correction of obvious errors, sources of additional information, particular features or applications, relation of the system studied to similar or isomorphous systems, etc.

Diagrams are organized in seven sections: 1) metal-oxygen systems, 2) metal oxide systems, 3) systems with oxygen-containing radicals, 4) systems containing halides only, 5) systems containing halides with other substances, 6) systems containing cyanides, selenides, sulfides, etc. and 7) systems containing water.

Hard bound; 513 pages. Price: $35 to nonmembers, $30 to members of the American Ceramic Society, $20 to student members.

***The 1964 basic volume** contains 2066 diagrams (without commentaries) and a 33-page introductory section, including glossary of terms, discussion of the phase rule, interpretation of diagrams, experimental methods and selected bibliography.

Hard bound; 601 pages. Price: $35 to nonmembers, $30 to members of the American Ceramic Society, $20 to student members.

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†**The 1969 Supplement** contains 2083 phase equilibrium diagrams (without commentaries) on the seven areas of interest covered in the 1975 Supplement. Indexes are cumulative for the Supplement and the basic volume.

Hard bound; 625 pages. Price: $35 to nonmembers, $30 to members of the American Ceramic Society, $20 to student members.

Large Scale Phase Diagrams of Oxide Systems

The first series of ten large scale phase equilibrium diagrams of oxide systems is the work of E. F. Osborn and Arnulf Muan of Pennsylvania State University. F. A. Hummel, S. C. Samanta and D. W. Johnson of Pennsylvania State University contributed diagrams 11–13. Each diagram is on a 500-mm equilateral triangle, with a scale accurate enough to permit interpolation to within 0.1%.

The systems:

1. $CaO—Al_2O_3—SiO_2$
2. $CaO—MgO—SiO_2$
3. $MgO—Al_2O_3—SiO_2$
4. $Na_2O—Al_2O_3—SiO_2$
5. $K_2O—Al_2O_3—SiO_2$
6. $FeO—Fe_2O_3—SiO_2$
7. $CaO—FeO—SiO_2$
8. $MgO—FeO—SiO_2$
9. $FeO—Al_2O_3—SiO_2$
10. $CaO—Fe_2O_3—SiO_2$
11. $PbO—B_2O_3—SiO_2$
12. $CaO—PbO—SiO_2$
13. $SrO—PbO—SiO_2$

Price: $5 each or $45 per set of 10 to nonmembers, $3 each or $25 per set of 10 to members of the American Ceramic Society, $2 each or $15 per set of 10 to student members. (If set of 10 is ordered, specify numbers of diagrams under "Title" on order form.)

Binders for Society Periodical Publications

Made of heavyweight washable vinyl sealed on chipboard, the durable binders are navy blue with Ceramic Bulletin, Journal of the American Ceramic Society—Ceramic Abstracts, Journal of the American Ceramic Society, or Ceramic Abstracts printed in gold on the front cover and on the spine. Each will hold 12 copies. Fitted on the spine is a clear label holder where dates may be recorded. The binders are equipped with a multiple mechanism and 12 wires to hold the copies.

Price: $7 each.

Alumina as a Ceramic Material

This sourcebook for aluminum oxide ceramic technology covers characteristics of high temperature, transition and hydrated aluminas in detail. Includes nomenclature, natural occurrence and associations, benefication and preparation techniques, crystallographic features and mineralogical properties. Mechanical, thermal, sonic, electrical, magnetic, optical, radiation (nuclear), chemical and colloidal properties are critically reviewed with aspects of grinding, forming and sintering pertinent to the production of refractories, glass, cements, cermets, electrical insulation, thermal coatings and airborne equipment. Compiled and edited by Walter H. Gitzen. Society Special Publication No. 4.

Hard bound; 264 pages. Price: $16 to nonmembers, $12 to members of the American Ceramic Society, $10 to student members.

Advances in Nucleation and Crystallization of Glasses

The 26 papers in this volume were presented at the American Ceramic Society Glass Division symposium in April 1971. The book is a must for awareness in developments during the previous decade in nucleation, crystal growth and applications in inorganic glass systems.

Translation of this scientific knowledge into technological practice and the creation of a variety of consumer products are well documented in the Applications section of the book. Subject and author indexes are included.

Edited by L. L. Hench of the University of Florida and S. W. Freiman of the Naval Research Lab. Society Special Publication No. 5.

Hard bound; 290 pages. Price: $20 to nonmembers, $15 to members of the American Ceramic Society, $11 to student members.

1956–1970 Cumulative Index to American Ceramic Society Publications

This volume is a key to the literature of ceramic science and technical knowledge developed 1956 through 1970, as presented in papers in the *Journal of the American Ceramic Society* and *Ceramic Bulletin*. All papers are indexed in depth for these 30 volumes. The author index contains some 4520 references, the subject index some 12,700.

Hard bound; 92 pages. Price: $25 to nonmembers, $20 to members of the American Ceramic Society, $12 to student members.

Cumulative Index to Society Publications, 1918–1955 covers the first 38 years of the *Journal* and first 34 years of *Ceramic Bulletin*. This work has some 6280 references in the author index and some 16,800 in the subject index.

Hard bound; 131 pages. Price: $10 to nonmembers, $5 to members of the American Ceramic Society, $2 to student members.

Bibliography on Ceramics and Glass

The 1976 updated version of the 1967 text (now out of print) was compiled and edited by Larry L. Hench and B. A. McEldowney. The first works on ceramics in English through 1975 are covered; over 1700 entries are included,with an author index.

The bibliography is designed to present a listing of books by subject matter and author so that the reader can rapidly locate a book pertinent to the problem at hand. The four major classifications (ceramic science, analytical methods, ceramic engineering and glass technology) and their subdivisions, e.g., semiconductors, thermodynamics, optical microscopy, abrasives, corrosion, glass blowing, etc., were made to facilitate browsing among lists that are similar in nature.

Hard bound; 119 pages. Price: $12 to nonmembers, $8 to members of the American Ceramic Society, $5 to student members.

Advanced Materials: Composites and Carbon

This volume contains 25 papers presented in April 1971 at a symposium sponsored by the American Ceramic Society's Ceramic-Metal Systems Division, in cooperation with the Basic Science and Refractories Divisions. John D. Buckley, NASA-Langley Research Center, served as chairman of the symposium and compiled this volume.

Paperback; 222 pages. Price: $13 to nonmembers, $11 to members of the American Ceramic Society, $9 to student members.

(Over)

Electronic Ceramics

Each of the six chapters in this book was written by a recognized authority in his field of specialization. They were first presented as a continuing education symposium under the joint sponsorship of the National Institute of Ceramic Engineers, the Ceramic Educational Council and the Electronics Division of the American Ceramic Society. This work is excellent as a reference in electronic courses and for engineers to update their know-how. Compiled by O. J. Whittemore, Jr., University of Washington. Society Special Publication No. 3.

Hard bound; 70 pages; printed by offset from typed manuscript. Some 30 illustrations. Price: $13 to nonmembers, $9 to members of the American Ceramic Society, $8 to student members.

Proceedings of Materials & Equipment and Whitewares Divisions Meetings

Papers presented at Fall Meetings, with illustrations, printed by offset from the authors' manuscripts, with discussions: 1977, 1976, 1975, 1974, 1973 and 1968 Proceedings available.

Paperback, 5.5 by 8.5 in. page size. Each $10.

Ceramic-Metal Systems Bibliography and Abstracts, 1970–79

A looseleaf volume of abstracts pertaining to ceramic-metal systems, ceramic systems and porcelain enamels, including materials processes, properties and patents. This valuable ready reference is sponsored by the Ceramic-Metal Systems Division.

Annual suppplements to the 1970–79 edition are $3 each. The 1970–74 supplements are now available; subscriptions to the current volume, edited by Michael E. Arthur, are being taken. Looseleaf binders for the volume are $3 each.

Enameling literature published prior to 1970 is indexed and abstracted as follows:

"Ceramic-Metal Systems and Enamel Bibliography, 1966–69" at $12 per copy

"Ceramic-Metal Systems and Enamel Bibliography, 1960–65," at $18 per copy

"Enamel Bibliography and Abstracts, 1958 and 1959," at $6 per copy

"Enamel Bibliography and Abstracts, 1950–57," at $24 per copy

"Enamel Bibliography and Abstracts, 1928–39," at $5 per copy.

Cements Research Progress 1977

This survey of the scientific literature on cements published during 1977 was prepared by members of the Cements Division of the American Ceramic Society; J. Francis Young served as coordinating editor.

The book contains 15 chapters on manufacture of structural cements, composition of cement materials, hydration of portland cement, special reactions of portland cement, properties of hydration products, admixtures, properties of fresh pastes, properties of hardened pastes, durability, plasters, building limes, special structural cements, other inorganic cements, and reviews of cement research in Germany and reactivity of fly ashes with cement.

Paperback; 390 pages. Price: $20 to nonmembers, $16 to members of the American Ceramic Society.

Cements Research Progress 1976 surveys the scientific literature on cements published during 1976.

The book contains 14 chapters on: manufacture of structural cements, composition of cement materials, hydration of portland cement, special reactions of portland cement, properties of hydration products, admixtures, properties of hardened pastes, special structural cements, plasters, building limes, other inorganic cements, properties of fresh pastes and durability of hardened pastes, mineralizers and fluxes in the clinkering process, and cements research in France.

Paperback; 348 pages. Same prices apply as for the 1977 work.

Cements Research Progress of 1975 covers the scientific literature on cements published during 1975. The book contains chapters on the same subjects as the first 11 chapters listed for the 1976 work and a review of polymer-impregnated concretes.

Paperback; 225 pages. Same prices apply as for the 1977 work.

Cements Research Progress 1974 covers the scientific literature on cements published during 1974. The book contains chapters on the same subjects as the first 10 listed for the 1976 work, and a chapter on the Sixth International Congress on the Chemistry of Cement. A review of fiber-reinforced cementitous materials is included.

Paperback; 234 pages. Same prices apply as for the 1977 work.

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Journal Papers

The following papers appeared in the November-December 1978 issue of the *Journal of the American Ceramic Society*, formerly published under the same cover as *Ceramic Abstracts*:

Characterization of Organosilicon-Infiltrated Porous Reaction-Sintered Si_3N_4. K. S. Mazdiyasni, Wright-Patterson AFB, Ohio; Robert West and Larry D. David, University of Wisconsin, Madison

Grain Size/Microcracking Relations for Pseudobrookite Oxides. J. J. Cleveland and R. C. Bradt, The Pennsylvania State University, University Park

The Nature of the Alumina-Rich Phase in the System La_2O_3-Al_2O_3. R. C. Ropp and G. G. Libowitz, Allied Chemical Corp., Morristown, N.J.

Stress Intensity Factor Estimates for a Peripherally Cracked Spherical Void and a Hemispherical Surface Pit. Francis I. Baratta, Army Materials & Mechanics Research Center, Watertown, Mass.

Kinetics of Oxidation of Hot-Pressed Silicon Nitride Containing Magnesia. D. Cubicciotti and K. H. Lau, SRI International, Menlo Park, Calif.

Microcracking of Monoclinic HfO_2. S. L. Dole, O. Hunter, Jr., F. W. Calderwood and D. J. Bray, Iowa State University, Ames

Powder Diffraction Patterns and Structures of the Bismuth Oxides. John W. Medernach and Robert L. Snyder, New York State College of Ceramics at Alfred University, Alfred, N.Y.

Ionic Conduction of $Li_2O{\cdot}2SiO_2$ Glass Under DC Potential. Kazutaka Takizawa, Niigata University, Niigata, Japan

Finite Element Analysis of Stresses in Glass-to-Metal Foil Seals. A. K. Varshneya and R. J. Petti, General Electric Co., Cleveland, Ohio

HCl Leaching Rate and Microstructure of Phase-Separated Borosilicate Glasses. Takeshi Takamori, IBM Corp., Yorktown Heights, N.Y.; Minoru Tomozawa, Rensselaer Polytechnic Institute, Troy, N.Y.

Static and Dynamic Fatigue of a Polymer-Coated Fused Silica Optical Fiber. David Kalish and B. K. Tariyal, Bell Labs, Norcross, Ga.

Surface Charge of Vitreous Silica and Silicate Glasses in Aqueous Electrolyte Solutions. J. M. Horn, Jr. and G. Y. Onoda, Jr., University of Florida, Gainesville

Yttria Hydroxy-Salt Binders. C. E. Holcombe, Jr., Union Carbide Corp., Oak Ridge, Tenn.

The following papers are tentatively scheduled for publication in the January-February 1979 issue of the *Journal of the American Ceramic Society*, which will be published the latter part of January:

Recent Progress in Understanding Die Compaction of Powders. S. Strijbos and A. Broese van Groenou, Philips Research Labs, Eindhoven, Netherlands; P. A. Vermeer, Delft University of Technology, Netherlands

Phase Relations in the System Na_2O-TiO_2-SiO_2. F. P. Glasser and J. Marr, University of Aberdeen, Scotland

Mechanical Properties of Hot-Pressed Silicon Nitride with Different Grain Structures. G. Himsolt and H. Knoch, Institut fuer Werkstoff-Forschung, Cologne, Federal Republic of Germany; H. Huebner and F-W. Kleinlein, Universitat Erlangen-Nurnberg, Erlangen, Federal Republic of Germany

The System Hafnia-Samaria. P. Duran, Instituto de Ceramica y Vidrio, Madrid, Spain

K_{1c} and Delayed Fracture Measurements on Hot-Pressed SiC. J. L. Henshall and D. J. Rowcliffe, Brown Boveri Research Center, Baden, Switzerland; J. W. Edington, University of Cambridge, England

Effect of MoO_3 Addition on the Grain Growth Kinetics of a Manganese Zinc Ferrite. G. C. Jain, B. K. Das and N. C. Goel, National Physical Lab, New Delhi, India

Defect Centers in Gamma-Irradiated Single-Crystal Al_2O_3. C. F. Yen and R. L. Coble, Massachusetts Institute of Technology, Cambridge

The Role of Cerium Orthosilicate in the Densification of Si_3N_4. Tai-il Mah, K. S. Mazdiyasni and R. Ruh, Air Force Materials Lab, Wright-Patterson AFB, Ohio

The Defect Structure of Unintentionally Doped α-Al_2O_3 Crystals. S. K. Mohapatra, S. Tiku and F. A. Kroeger, University of Southern California, Los Angeles

Chemical Diffusion in Nickel Oxide. J. Nowotny and A. Sadowski, Polish Academy of Sciences, Krakow, Poland

Microstructures and Crystallization Behavior of Gels in the System La_2O_3-SiO_2. S. P. Mukherjee and J. Zarzycki, University of Montpellier, Montpellier, France

Strength Degradation of Glass Impacted with Sharp Particles: I, Annealed Surfaces. S. M. Wiederhorn, National Bureau of Standards, Washington, D. C.; B. R. Lawn, University of New South Wales, Kensington, N.S.W., Australia

Strength Degradation of Glass Impacted with Sharp Particles: II, Tempered Surfaces. B. R. Lawn and D. B. Marshall, University of New South Wales, Kensington, N.S.W., Australia; S. M. Wiederhorn, National Bureau of Standards, Washington, D.C.

Thermal, Structural, and Dielectric Properties of Cu-Doped Ge-S Glasses. J. Doupovec, I. Thurzo and G. Vlasak, Slovak Academy of Sciences, Bratislava, Czechoslovakia

SIMS Analysis of Aqueous Corrosion Profiles in Soda-Lime-Silica Glass. R. G. Gossink, H.A.M. de Grefte and H. W. Werner, Philips Research Labs, Eindhoven, Netherlands

The Trident Seal—A Rapid and Accurate Expansion Differential Test. H. E. Hagy, Corning Glass Works, Corning, N.Y.

Retardation of Tricalcium Aluminate Hydration by Calcium Sulfate. M. Collepardi, G. Baldini and M. Pauri, University of Ancona, Ancona, Italy; M. Corradi, Mac Mediterranea Additivi Cemento, Treviso, Italy

Micromorphology of the Interfacial Zone Around Aggregates in Portland Cement Mortar. B. D. Barnes, Sidney Diamond and W. L. Dolch, Purdue University, West Lafayette, Ind.

Kinetics of Formation of an Iron-Zircon Pink Color. Richard A. Eppler, SCM Corp., Baltimore, Md.

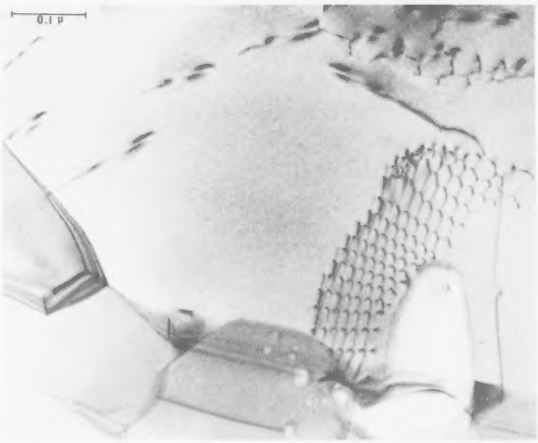
Erosive Damage Depth in Ceramics: A Study on Metastable, Tetragonal Zirconia. F. F. Lange and A. G. Evans, Rockwell International Science Center, Thousand Oaks, Calif.

Some Effects of Cavities on the Fracture of Ceramics: I, Cylindrical Holes; II, Spherical Cavities. A. G. Evans, D. R. Biswas and R. M. Fulrath, Rockwell International Science Center, Thousand Oaks, Calif.

Quenched Metastable Glassy and Crystalline Phases in the System Lithium-Sodium-Potassium Metatantalate. Kurt Nassau, Christine A. Wang and Michael Grasso, Bell Labs, Murray Hill, N.J.

The Influence of Substructures on Tensile Creep of MgO Single Crystals. A. H. Clauer, Battelle Columbus Labs, Columbus, Ohio; M. S. Seltzer, Porter, Wright, Morris and Arthur, Columbus, Ohio; B. A. Wilcox, National Science Foundation, Washington, D.C.

DISLOCATION STRUCTURES IN SINTERED Al_2O_3



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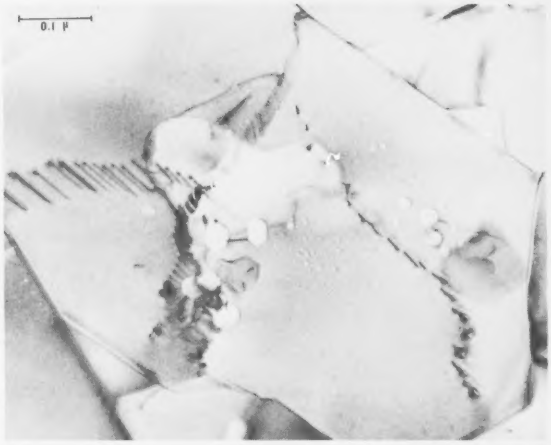

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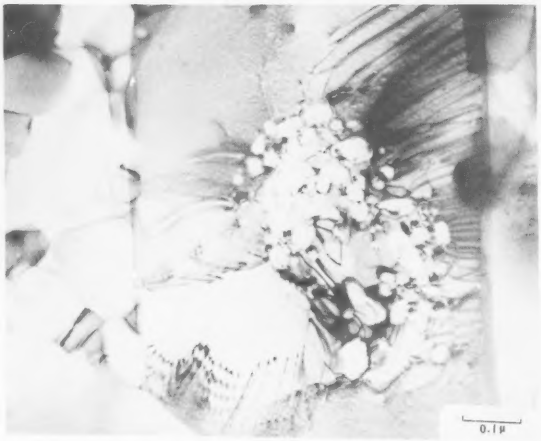

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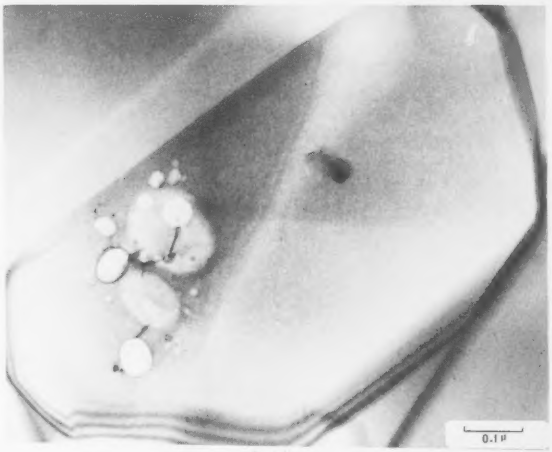

(d)

FINE GRAINED, SLIGHTLY POROUS, SINTERED Al_2O_3 CERAMICS SHOW AN UNUSUALLY HIGH DISLOCATION DENSITY ((a)-(c)). MOST DISLOCATIONS ARE IN THE FORM OF LOW-ANGLE BOUNDARIES WHICH "CONNECT" PORE CLUSTERS TO HIGH-ANGLE BOUNDARIES. ON MODEST ANNEALING (1600° C FOR 24 HRS.), THE DISLOCATIONS DISAPPEAR, BUT THE PORE CONFIGURATION AND GRAIN STRUCTURES ARE ESSENTIALLY UNCHANGED, AS IN (d). (ALL MICROGRAPHS TAKEN IN BRIGHT FIELD AT 125 keV)

L.U. OGBUJI
T.E. MITCHELL
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From the 80th Annual Meeting Ceramographic Exhibit